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I. Introduction

A family household can be defined "as those members of the household who are related, to a specified degree, through blood, adoption or marriage."[1] The definition, as quoted, is applied in the source to the term "family," but the discussion goes on to say that the latter term can be and is used in a wider sense of a group related by blood, adoption and marriage, comprising more than one household. The emphasis on family households is a matter of statistical expediency, since identification of families comprising more than one household is difficult.

To the extent that ties of blood, marriage, or adoption are indicative of a community of interest, the family, in this wider sense, is an important unit in economic analysis--since it presumably makes joint decisions on the production and disposition of income, either in a continuous and comprehensive fashion, or intermittently and for a limited range of decisions. The possibility of such joint decisions on the economic choices of the family makes the unit important in the analysis of income inequalities, of the supply of labor force, and of the flow of savings and capital formation. The statistical data that are available for use below all relate to households, not limited to family households.[2] But in evaluating the data and the findings that they suggest, we must keep in mind the concept of the family as a group, the relations among whose members are close enough to lead to significant joint decisions on economic matters.

Two earlier papers, to which the present one is a sequel, suggested

findings relating to households that are relevant here, and may be briefly noted.[3] First, in general, the average household in the less developed countries and regions has, in recent years, been significantly larger than in the developed countries. One major factor in this difference is the significantly larger proportion of children in the total population of LDCs than of the DCs--and children are preponderantly members of family households. Second, the differences in size of households within the country are, as might be expected, positively associated with total income per household. But if we shift to household income per person, the smaller households tend to show, quite generally, higher levels of per person income than larger households.

The analysis below deals largely with comparisons of average size of household--in international cross-section for recent years, in intra-national comparisons of households between the rural and urban populations, and in comparisons over long time spans for a single country. The aim is to allocate the differences in average size between the contribution of the presence of children (reflecting differences in fertility and rates of natural increase) and that of the tendency of adults to live jointly or separately. The basis for such an allocation is first presented in a comparison for the United States (March 1976) and Taiwan (end of 1975) for which we have the requisite detailed data (Section II). Such allocations of differences in average size are then illustrated for comparisons among countries or regions at different levels of development; comparisons of rural and urban households within one the same country; and those over a long time span within a country (Section III). The distinctive character-

istics of the much larger proportion of small households, all adult, in the developed regions as compared with those less developed, is explored in Section IV, again in a comparison between United States and Taiwan, using the cross-classifications of households by size and by age of head (and partly by sex of head). Concluding comments bring us back to the wider concept of the family mentioned above, in an attempt to evaluate the significance of our findings for households in their bearing upon the economic role of the family, widely defined, in countries or regions at different levels of economic development.

II. Allocation of Differences in Size of Average Household: An Illustration.

The comparison of the distributions of households by size (and related variables) in United States and Taiwan, in Table 1, provides an illustration that would help us outline the procedure for distinguishing the differences due to presence of children from those attributable to differing propensities of related adults to live together (or apart). The interest in this distinction stems from the difference in the sources of what might be called the NIC factor (natural increase-children) and the JAA factor (jointness or apartness of adults). In almost all countries, children are the responsibility of their parents or of other related members of the family--so that they are naturally members of family households and their proportion in total population would, all other conditions being equal, be positively associated with the average size of the household. But in a population with limited emigration and immigration, the proportion of children is a function of fertility and survival--so that there is a direct line of connection between the population's vital rates

Table 1

Structure of Households by Size,

United States, 1970 and 1976, and Taiwan, 1975

A. United States, March 1970 and March 1976

Size - Classes of Households	March, 1976 % Shares in: HHS	Persons	Relatives, Money Income 1975		March, 1970 %Shares HHs	Persons per HH: Below 18	18 & over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. 1 person	20.6	7.1	49	140	17.0	0	1.00
2. 2 persons	30.6	21.4	96	138	28.8	0.06	1.94
3. 3 persons	17.2	18.0	114	109	17.3	0.71	2.29
4. 4 persons	15.7	21.6	127	92	15.8	1.64	2.36
5. 5 persons	8.6	14.7	135	79	10.4	2.54	2.46
6. 6 persons	4.1	8.4	131	64	5.6	3.40	2.60
7. 7 & over	3.2	8.8	124	46	5.1	5.21	3.06
8. Total	72.87	210.6	13.78	4.77	62.87	1.12	2.05
	(millions)		($000s)		(mill.)	(persons)	
9. Persons per Household	2.89				3.17		

B. Taiwan Area, end 1975

Size-Classes of Households	% shares in HHs	Person	Relatives, Income 1975 Per HH	Per person	Persons per HH: Minors	Adults
	(1)	(2)	(3)	(4)	(5)	(6)
11. 1 person	3.1	0.6	48	255	0	1.00
12. 2 persons	5.2	2.0	76	202	0.19	1.81
13. 3 persons	10.3	5.9	85	149	0.89	2.11
14. 4 persons	16.9	12.8	95	125	1.75	2.25
15. 5 persons	22.3	21.1	98	104	2.60	2.40
16. 6 persons	18.9	21.6	104	91	3.32	2.68
17. 7 & over	23.3	36.0	128	82	4.45	3.73
18. 7 persons	11.3	14.9	106	80	3.95	3.05
19. 8 persons	6.0	9.1	122	80	4.33	3.67
20. 9 & over	6.0	12.0	144	72	5.50	5.03
21. Total	3.01	15.88	101.81	19.32	2.64	2.63
	(mill.)		(000s NT)			

Table 1 --- continued

Notes

Panel A --- cols 1-4: From US Bureau of the Census, Current Population Reports, Series P-60, no. 104, March 1977, Table 3, p. 13; and Table 15, p. 48

Panel A, col. 5: Calculated from US Bureau of the Census, Current Population Reports, Series P-60, no. 72, August 1970, Table 5, p. 15

Panel A, columns 6 and 7: The breakdown between persons under 18 and 18 and over is given in the source for cols. 1 and 2 for the total population in households, not for the size-classes of households. We estimated the breakdown, for households beginning with the size-class of 2 and through that of 7 and over by using the breadown given for families (of 2 and over) for the same year in US Bureau of the Census, 1970 Census of Population, Subject Report PC(2) 4A, Family Composition, May 1973, Table 3, pp. 7-8; applying the ratios to the size-classes of households; and adjusting to add out to the totals of below 18 and 18 and over given in the source for cols. 1 and 2.

Panel B, column 1: Taken or calculated from Directorate General of Budgets, Accounting and Statistics (DGBAS), Report on the Survey of Personal Income Distribution in Taiwan Area, 1975, Taipei 1976, Table 18, pp. 164-69; and text Tables 11, p. 62, and 13, p. 68.

Taiwan Area includes all of the country; Taiwan Province (to be used in later tables) excludes Taipei City.

Minors are defined as persons under 21 years of age; adults as persons 21 years old and over.

The income data refer to "available" income, e.e., "distributed factor income plus current transfer receipts less current transfer expenditures." (p. 47).

and the average size of the household. The forces behind the JAA factor are different, in that they have to do with conditions that affect the degree to which related (blood, marriage, or adoption) adults live together or apart. While there is some association between conditions affecting fertility and natural increase and those affecting family togetherness or apartness, the distinction is clearly of analytical interest and value.

Table 1 uses data for the United States and Taiwan because they are available in revealing detail, and because the two countries differ substantially in the average size of the household. The evidence can be briefly summarized.

First, the columns relating to average income per household and per person, for households grouped by size, confirm the findings noted above from the 1976 paper for earlier years and more countries (see footnote 3) on the consistent negative association between per person income and size of the household, contrasted with the positive association between household total income and household size (columns 3 and 4, Panels A and B).

Second, and more directly relevant here, the difference in average size of household, between 2.89 persons in the United States in March 1976 and 5.27 persons in Taiwan at end of 1975, is clearly due to a markedly different distribution of households by size in the two countries. In the United States, the proportion of small households (of 1 and 2 persons each) was over 50 percent; it was less than 10 percent in Taiwan. In contrast, the proportion of households of 6 or more persons was well below 10 percent in the United States, and 42 percent in Taiwan (see col. 1, both Panels).

Third, the data for both countries provide a breakdown (directly or

indirectly) between the younger subgroup and the older, for each class of households grouped by size. For the United States it had to be estimated for 1970 (March), the date at which the population census provides more detail than the annual sample survey of family incomes. For Taiwan it can be taken directly from the official report on the 1975 family sample survey. The line of division is below 18 years of age, and 18 and over for the United States; that for Taiwan is between below 21 years of age, and 21 and over--so that direct comparison is difficult; but this disparity does not affect what appear to be two main conclusions from the data as given.

The first is that in the one and two person households the proportion of the young generation is either 0 or so small as to be negligible (see lines 1 and 2, col. 6, Panel A; and lines 10 and 11, col. 5, Panel B); and these proportions would be even lower if the line between children and adults were drawn not at 18 or 21 but at a lower age (as we do below, largely because of our interest in comparisons between developed and less developed countries). While the comparison here is limited to two countries, for our exploratory purposes the findings are sufficient to warrant, in further analysis, the assumption that 1 and 2 person households include such insignificant proportions of children that they can be taken to represent adults only.

The second conclusion is that while the contribution of those under 18 or under 21 is substantial in the shift from 2 person households to those in larger size-classes, there is also a rise in the number of adults per household (see columns 6 and 7 of Panel A, lines 3-8, and columns 5 and 6 of Panel B, lines 12-19). And while as the data stand in Table 1 direct comparisons of the younger groups and the adults between United States and

Taiwan cannot be made, it is nevertheless clear that with an average of persons aged 18 and over per household in the United States at 2.05 (in 1970), and that in Taiwan in 1975 of persons 21 of age and over of 2.63 per household, the difference between the two countries in numbers of adults per household makes a substantial contribution to the inter-country differences in average size of the household. And it is particularly at the levels of large households that the difference in contribution of disparities in numbers of adults becomes significant.

The table just discussed and the comments on the findings that it suggests are preliminary to a full allocation of the differences in average size of the households between Taiwan and United States--one that would serve as a pattern to be applied to a variety of international and other comparisons.

Before considering the allocation shown in Table 2, it may help to state specifically the two assumptions on which it, and all following allocations, are based, and indicate the decision with reference to the dividing age line between children and adults that is followed in the analysis below.

One of the two assumptions is that the proportion of an age group defined as that of children (or that of adults) to total population can be identified with the proportions of the same age groups to the total of the population included in individual households. The two sets of ratios are not necessarily identical, because total population is inclusive of institutional groups not included under private, individual households; and the proportions of age groups in the institutional population are not usually the same as in the household population. But the data on house-

holds, in relation to total population, used in the subsequent tables in Section III (mostly from the United Nations, Demographic Yearbooks, for selected years), show that in the vast majority of countries population in households is close to total population, so that the possible error involved in this first assumption is minor to the point of being negligible.

The second of the two assumptions was noted as a finding in Table 1, viz. that one and two person households are taken to include such negligible proportions of children that they can be assumed to be limited to adults alone. This proposition is subject to further check, if cross-classifications by age and size-classes of households are found for a variety of other countries, at different levels of economic development; and it partly depends on the level of the age line that distinguishes between children and adults.

In Table 2 two such lines are used--at 18 and at 15 years of age. This, and other possible choices, raises a question as to the full meaning of the distinction. The position taken here is that the major attribute of children in this analysis is their economic and other dependence, which makes it indispensable for them to be members of a family (barring institutional provisions when the family is not available, or community forms of care of the type involved in some of the Israeli kibbutzim). At the age when, within a given society, younger members of the family assume a share and responsibility in production, they cease to be effectively dependent and acquire mobility among households not theretofore feasible. The difficulty is that this age may differ among societies at different levels of economic and social development; and yet we need an identical dividing line, if differences arising in the comparison are to be allocated

Table 2

Allocation of Differences in Average Size of Household, Taiwan (end 1975) and United States (March 1976)

	Children defined as below 18				Children defined as below 15			
	Taiwan (1)	USA (2)	Differ. (3)	% (4)	Taiwan (5)	USA (6)	Differ. (7)	% (8)
A. Allocation between contribution of children and adults								
1. Persons per household	5.27	2.89	2.38	100.0	5.27	2.89	2.38	100.0
2. Percent of children in total	44.1	30.8			35.3	25.3		
3. Children per household	2.32	0.89	1.43	60.1	1.86	0.73	1.13	47.5-
4. Adults per household	2.95	2.00	0.95	39.9	3.41	2.16	1.25	52.5+
B. Differential contribution of 1 and 2 person households and of the residual (3+ person households)								
5. Percent of 1 person households	3.1	20.6			3.1	20.6		
6. Deviation from higher average of adults per household	-1.95	-1.95			-2.41	-2.41		
7. Contribution of 1 person households (line 5 x line 6)	-0.060	-0.402	0.342	14.4	-0.075	-0.496	0.421	17.7
8. Percent of 2 person households	5.2	30.6			5.2	30.6		
9. Deviation	-0.95	-0.95			-1.41	-1.41		
10. Contribution of 2 person households (line 8 x line 9)	-0.049	-0.29	0.242	10.1	-0.073	-0.431	0.358	15.0
11. Contribution of households of 3 and over	+0.109	-0.257	0.366	15.4	+0.148	-0.323	0.471	19.8

Table 2 (continued)

Notes:

All data, with exceptions noted below, are from Table 1. The exceptions are the percentages in line 2 for Taiwan, and the percentage in line 2, col. 6 for USA. The estimates for Taiwan were calculated from the age distribution at end of 1975, shown in DGBAS, Statistical Yearbook, 1975 (Taipei, 1976), p. 4. The estimate for USA was taken from United Nations, Selected World Demographic Indicators by Countries, 1950-2000, Working Paper ESA/P/WP,55, May 1975 (mimeographed), p. 97 (medium variant).

The numbers of children and adults per household are obtained by multiplying the percentages in line 2 by the entries in line 1 (columns 1-2, and 5-6). The differences in columns 3 and 7, lines 1, 3, and 4, are by subtraction of the smaller household country from the larger.

The contributions in Panel B of the 1 person, 2 person, and 3 and over person households, assumes that there are no children in the former groups of households (i.e. of 1 and 2 persons). The contributions are then estimated with reference to the number of adults per household in the country with the larger average household (measured in terms of total persons).

The residual (line 10) is, for the larger household country, the difference between the sum of entries in lines 7 and 10 and zero; for the smaller household country, the difference between the sum of entries in lines 7 and 10 and total shortfall in adults per household (i.e., -0.950 in column 3 and -1.250 in column 7).

The percentages in columns 4 and 8 are to the total difference shown in line 1, columns 3 and 7.

between the two factors (unless one wants to complicate the analysis by adding a third, the difference in age-division lines between children and adults). We adopted the lower dividing line at 15, since it appeared more suitable for the less developed countries; and this position is supported by the evidence in Table 6 below, which strongly suggests that for the LDCs the high proportions of persons in ages 15-19 among the urban population as compared with rural, contrasted with the much lower proportions of persons under 15 among the urban than among the rural, are indicative of rural-urban migrations among the 15-19 year olds. But this decision about the age-dividing line can be changed, within the procedure adopted, with results for the allocation that can be easily inferred from the comparison of the results for the two dividing lines in Table 2.

Panel A of the table shows that the proportion of children in the total, and thus in the household population, was much larger in Taiwan than in the United States -- 44 compared with 31 percent for persons under 18, and 35 compared with 25 percent for persons under 15. The contribution of children, the NIC factor, to the total difference in the average size of the household between the two countries, was then 1.43 or 60 percent of the total when children were defined at under 18; and 1.13 or 47 percent of the total when children were defined at under 15. In either case, a substantial component in the total difference was the differing number of adults per household. It contributed 40 percent of the total difference, when adults were defined as 18 years and over; and 53 percent when they were defined as 15 years of age and over. Obviously, the higher we set the age line of division between children and adults,

the greater will be the proportional contribution of the children, i.e. the NIC factor, to the total difference in size of average household between two countries (or regions) and the smaller the proportional contribution of the JAA, or adults factor, with opposite effects of lowering the age line of division.

In Panel B we proceed to distinguish the effects on differing size of households, in terms of adults, among those of 1 person, 2 person, and households of 3 and over persons (for whom only the average of adults per households is involved). In general, the country with the larger average household (in this case Taiwan) will also have a larger number of adults per household; and the contribution to this difference in average number of adults can be allocated as between 1,2, and 3+ person households --- in a manner indicated in Panel B. It may be observed that the greater proportion of 1 and 2 person households in the United States than in Taiwan makes a marked contribution to the differences in size of average household --- about 25 percent of the total on one assumption and about 33 percent on the other (see lines 7-10, col. 4 and 8); with that of the 3+ households being 15 and 20 percent respectively (line 11, columns 4 and 8). And one should note, in particular, that whereas the two assumptions concerning the age-division line affect the distribution or allocation in Panel A, they have minor effects on the relative magnitude of the differential contribution of 1 person, 2 person, and 3+ person households. In terms of their proportional contribution to the difference in line 4, col. 3 and 7 (i.e. the JAA factor), the results are 36 percent and 34 percent respectively for the contribution of 1 person households, 25 and 29 percent for that of 2 person households, and

39 and 38 percent for that of the 3+ person households.

The procedure just outlined could be elaborated were the data for countries or regions involved in the comparison to contain cross-section classifications of households by number of persons as well as age-structure of members. Such a cross-classification would permit experimentation with different age levels at which the distinction between children and adults could be made (and distinguishing ages of adults at which they might become as dependent as children); and the total difference allocated among more subgroups of households by size of their adult members. But such data are not at hand, and would require a search in basic census or sample sources that is not feasible here. We proceed with allocations of the simple type indicated in Table 2 for various comparisons intended to illustrate, if only broadly, the variety of results that may be suggested. Our major interest is in evaluating the findings relating to both the NIC and the JAA factors for the light that they cast upon the relation of the conventionally available data on households (or family households) to the broader concept of the family as a group of persons sufficiently related to each other to be prone to making joint decisions on economic and economically significant choices.

III. Allocation of Differences in Average Size of Household--International, Rural-Urban, and Over-Time Comparisons

Table 3 relates to a few countries, selected to cover a wide range in average size of household, rather than attempt a summary of a larger number of countries in developed and less developed regions of the world. This choice is due to the limitations of the coverage of United Nations

Table 3

Allocations of Differences in Average Size of Household, Selected Countries, Recent Years

A. Basic Data for the Individual Countries

		Sweden, 1970 (1)	Japan, 1970 (2)	Brazil, 1970 (3)	Syria, 1970 (4)	Thailand, 1960 (5)
		Average Crude Vital Rates, per 1,000, Preceding Three (or Two, in col. 5) Quinquennia				
1.	Birth rates	14.7	17.7	39.0	47.3	47.1
2.	Death rates	10.0	7.3	10.3	17.0	19.7
3.	Rates of natural increase	4.7	10.4	28.7	30.3	27.4
4.	Rates of growth of population	6.5-	10.0	28.8	30.3	27.7
		Data Relating to Households				
5.	Persons per household	2.59	3.62	4.78	5.91	5.64
6.	Percent of total population below 15	20.8	24.0	42.7	45.2	44.7
7.	Children per household	0.54	0.87	2.04	2.67	2.52
8.	Adults per household	2.05	2.75	2.74	3.24	3.12
9.	Percent of 1 person household	25.3	13.2	2.5	5.7	2.5
10.	Percent of 2 person household	29.6	15.0	7.3	9.1	7.3

B. Allocation of Differences between NIC (natural increase children factor) and JAA(jointness and apartness of adults factor)

		Japan & Sweden (1)	Brazil & Sweden (2)	Syria & Sweden (3)	Brazil & Japan (4)	Syria & Japan (5)	Syria & Brazil (6)	Thailand & Brazil (7)	Thailand & Sweden (8)
11.	Differences in persons per household	1.03	2.19	3.32	1.16	2.29	1.13	1.06	3.05
12.	NIC	0.33	1.50	2.13	1.17	1.80	0.63	0.48	1.98
13.	JAA	0.70	0.69	1.19	-0.01	0.49	0.50	0.58	1.07
14.	NIC %	32	68	64	101	79	56	45	65
15.	JAA %	68	32	36	-1	21	44	55	35

Table 3 (continued)

C. Contributions of 1 and 2 person households to Differences in Average Size of Households, Selected Comparisons

	Larger households (1)	Smaller households (2)	Differential contribution (1-2) (3)	Percent of total difference (4)
Japan-Sweden				
16. Contribution of 1 person households	-0.023	-0.443	0.420	41
17. Contribution of 2 person households	-0.011	-0.222	0.211	20
18. Residual (contribution of 3+ person households)	0.034	-0.035	0.069	7
Brazil-Sweden				
19. Contribution of 1 person households	-0.004	-0.440	0.436	20
20. Contribution of 2 person households	-0.005	-0.219	0.214	10
21. Residual	0.009	-0.031	0.040	2
Syria-Sweden				
22. 1 person households	-0.013	-0.567	0.554	17
23. 2 person households	-0.011	-0.367	0.356	11
24. 3+ person households	0.024	-0.256	0.280	9
Syria-Brazil				
25. 1 person households	-0.013	-0.006	-0.007	-0.6
26. 2 person households	-0.011	-0.009	-0.002	-0.2
27. 3+ person households	0.024	-0.485	0.509	45

Table 3 (continued)

Notes:

Lines 1-4, and 6: The entries are calculated from the United Nations 1975 working paper cited in the notes to Table 2. The entries in lines 1-4 are arithmetic means of the quinquennia (3 or 2) birth, death, natural increase, and growth rates, preceding 1970 or 1960. Those in line 6 are summations of the percentages of total population shown for 0-4 and 5-14 age groups.

Lines 5, 9, and 10: Taken from UN summaries of data on distributions of households by size (number of person classes), in Demographic Yearbook, 1973 (New York 1974), Table 24, pp. 396 ff; and Demographic Yearbook, 1971 (New York, 1972), Table 11, pp. 396 ff.

All other entries by calculation from the basic data in lines 5, 6, 9, and 10. For the procedure see the notes to Table 2 above and the discussion in the text.

data on size and size-distribution of households and in the lack of comparability specifically in the definition and distinction of one-person households.[4] This latter limitation is particularly restrictive in its bearing upon an allocation of the type outlined in Table 2, since it bars reliance on the estimate of effects of the larger proportion of one-person households usually found in the more developed countries with a lower average size of household (but also found in a large number of LDCs).

Panel A includes for the five selected countries not only data relating to size of households, but also on the broader demographic characteristics--the percent proportion of persons under 15 in total population (line 6), the crude vital rates (birth, death, and natural increase, lines 1-3), and the average rate of increase per thousand - all these rates being averages over the 15 year period preceding the date of line 6 (and of the statistics on size of household). The rate of population growth, in line 4, can differ from that of the rate of natural increase, in line 3, because of a substantial balance of in-and-out migration. But the difference is significant only for Sweden, reflecting a substantial in-migration into the country that would, presumably, lower somewhat the percentage proportion of children, i.e. of population under 15 years of age.

For the small sample covered here there is close positive association between rates of natural increase and growth rates of population, on one hand, and the proportions of children under 15 in total population. Since the differences in birth rates are far more dominant than those in death rates, it is birth rate differentials that are largely responsible for the differentials in rates of natural increase and growth rates of

population--so that it is the fertility differentials that largely account for the differences in the proportions of children under 15 in total population. The set of connections observed here for the small number of countries would be found also in the larger universe, so long as in the countries included the dominance of birth rate differentials in differences in rates of natural increase prevails.

The procedure followed rests on binary comparisons. In Panel B the allocation is between the children (NIC factor)and the jointness of adults factor (JAA), and the dominant impression is of a wide variety of combinations. Thus, in comparing Sweden and Japan, with a difference between the averages of 1.03 persons, we find that the children's proportion contributes only about a third of the total difference--two thirds being due to the greater jointness of adults in Japan (col. 1 of Panel B). This suggests a distinct tendency toward larger adult households in Japan. In comparing Sweden and Brazil--with a much wider disparity in the average size of households in the two countries--the contribution of the NIC factor is absolutely and proportionately much wider (col. 2, of Panel A); the contribution of the JAA factor is absolutely the same, but proportionately much smaller than in the Sweden-Japan comparison. Finally, in the comparison between Sweden and Syria--with a still larger disparity in average size of the household--the NIC factor is dominant, and yet there is also a substantially larger contribution of the JAA factor (of 1.19) persons per HH, compared with about 0.7 in the Sweden-Japan and Sweden-Brazil comparisons, see col. 3 of Panel B). Apparently, the international differences in patterns of household and family are substantial not only

with respect to differing numbers of children associated with differential fertility, but also in the patterns of joint or separate living of adult members. Some countries, such as those represented by Japan, Syria, and Thailand, show more of a tendency toward joint residence by adult members than appears to be true of Brazil and Sweden.

There is also considerable variety in the relative contribution of the differing proportions of 1,2, and 3+ person households to the JAA component (Panel C). In the first three of the four binary comparisons shown, the contributions of the 1 and 2 person households are proportionally high---accounting together for most of the JAA component in the total difference; the relative share of the difference in adults per household among the larger households (of 3+ members) is minor. But this is not true of the fourth comparison (Syria-Brazil), in which all of the JAA component is accounted for by the larger number of adults in the Syrian households of 3 persons and over.

The findings are limited, with the number of countries kept small to obviate too many binary comparisons. But they are varied enough to suggest interesting variability among countries, not only between the developed and less developed groups, but also within the two major divisions, with respect to the relative role of the children and the jointness of adults factors, as well as with respect to the source of contribution to the JAA component of households with differing numbers of persons or adults. There are clearly institutional differences in the structures of households, over and above the major effects of fertility and rate of natural increase so clearly associated with levels of economic development. These differences could be

brought out more clearly with more intensive analysis of the sex and age structure of households in selected countries, with particular attention to the grouping of households in terms of adult members, for countries otherwise comparable with respect to level of economic development and the magnitude of the NIC component in the difference in size between average households.

Such more intensive study is beyond the limits of the present exploratory essay. We turn now to data relating to proportions of children under 15 in total population, which are available for a large number of countries on a worldwide basis, and can be summarized, as of a given date (we use 1955 and 1970), to indicate the possible contribution of this factor (NIC) to differences in average size of household between large developed and less developed regions (Table 4). The comparison is limited to market economies.

One intriguing finding in Panel A is that both in 1955 and 1970 the percentage proportions of children under 15 differ little among the major LDC regions in lines 1-4, col. 2, while even the absolute, let alone relative differences in this proportion among the developed regions are much more marked--between the older countries of developed Europe and Japan, on the one hand, and United States and other overseas offshoots of Europe, on the other. This is a reflection of the rather uniformly high fertility and rates of natural increase among the major less developed regions (at least at the two dates indicated), despite substantial differences in per capita income between say Latin America in line 4 and Asia in line 1. It also reflects the higher

Table 4

Proportions of Population under 15, 1955 and 1970, and Approximate Allocation of Differences in Size of Average Household, 1970, Less Developed and Developed Market Economies

Panel A. Proportions under 15 and Growth Rates of Population, 1955 and 1970

		% under 15		Population (mill)		Growth Rate per 1,000 per year
		1955 (1)	1970 (2)	1955 (3)	1970 (4)	(5)
1.	East and Middle South Asia	40.3	43.4	712.1	1,024.7	24.4
2.	Middle East	41.9	43.9	108.8	162.2	27.0
3.	Subsaharan Africa	43.7	44.2	169.2	241.7	24.1
4.	Latin America	43.2	44.4	159.6	271.2	36.0
5.	All LDCs above	41.4	43.7	1,150	1,700	26.4
6.	Developed Europe	23.8	24.2	249.7	282.0	8.1
7.	Japan	30.2	24.0	89.8	104.3	10.0
8.	United States	29.5	28.3	165.9	204.9	14.2
9.	Other Overseas	31.0	29.9	27.1	36.8	20.6
10.	All DCs above	27.2	25.8	532.5	628.0	11.0

Panel B. Allocation of Differences in Size of Average Household between LDCs and DCs, 1970

		LDCs (1)	DCs (2)	Difference (3)	% (4)
11.	Persons per HH, estimate	5.00	3.00	2.00	100.0
12.	% under 15	43.7	25.8		
13.	Persons under 15 per HH	2.18	0.77	1.41	70.5
14.	Adults per HH	2.82	2.23	0.59	29.5
15.	% of 1 person HHs (approximate)	5.0	20.0		
16.	Contribution of line 15	-0.091	-0.364	0.273	13.7
17.	% of 2 person HHs (approximate)	10.0	30.0		
18.	Contribution of line 17	-0.082	-0.246	0.164	8.2
19.	Residual (3+ HHs)	0.173	0.020	0.153	7.6

Table 4--continued

Notes:

The data is Panel A are all from United Nations, Working Paper, ESA/P/WP.55 (New York, May 1975, mimeo). Eastern and Middle South Asia is the sum of the two regions so indicated; Middle East in the sum of West South Asia and North Africa; Subsaharan Africa is the sum of three regions--Eastern, Middle and Western Africa (omitting Southern); Latin America is the total excluding the temperate region. The growth rates in column 5 are derived directly from the two population totals in columns 3 and 4, and therefore reflect net interregional migration. For the developed regions, the composition is as follows: developed Europe includes Northern and Western Europe, plus Italy; and the "other overseas" are the sum of Canada, Australia and New Zealand.

The calculations in Panel B proceed in the manner shown in Tables 2 and 3 above, but use approximate values in line 11, 15, and 17. These are based, in part, on the summary distribution of households by size for LDCs and DCs in early and late 1960s (Table 10, p. 385 in my paper, "Fertility Differentials Between Less Developed and Developed Regions: Components and Implications," in Proceedings of the American Philosophical Society, vol. 119, no. 5, October 1975), partly on more recent data for individual countries--with crude allowance for the decline in size of households in DCs and rise in the proportion of 1 and 2 person households by 1970.

fertility and rate of natural increase among the overseas offshoots of Europe, despite their generally higher per capita income, than in Europe or in Japan.

The other interesting finding is that not only were the proportions of children under 15 substantially higher among the less developed regions, in lines 1-5, than among the developed, in lines 6-10, thus contributing significantly to the larger average size of households in the LDCs than in the DCs; but also this excess in the proportion of children among the LDCs widened in the fifteen years preceding 1970. The proportion rose between 1955 and 1970 for each of the four LDC regions, most strikingly among the populous Asian countries in line 1, while there were substantial declines in three out of the four developed regions. The disparity in the proportions of children under 15 among the LDC and DC groups widened from 14.2 percentage points in 1955 to 17.9 percentage points in 1970, and one could assume that with the marked decline in fertility in the DCs after 1970 the widening continued to date.

Panel B attempts to translate the evidence in Panel A into a full allocation of the difference between LDCs and DCs in size of the average household, about 1970, between the two large groups of market economies. Using the 1975 paper cited in footnote 3 above, which suggested for the early and mid-1960s average sizes of about 5 and 3.3 respectively, we assumed the average size in LDCs and DCs in 1970 to be roughly 5.0 and 3.0 respectively, while on the basis of scattered evidence in the 1971 and 1973 Demographic Yearbooks on size-distribution of households in

a number of developed and less developed market economies, we set the proportions of 1 and 2 person households at 5 and 10 percent respectively for LDCs compared with 20 and 30 percent proportions for these two groups of smaller households in the DCs. More detailed data might change these assumptions by a couple of percentage points, but not sufficiently to affect the major conclusions, and the same can be said of the effects of more elaborate approximations to the average size of households for the two wide groups of regions.

The allocation for these two groups in 1970 shows about seven-tenths of the difference associated with the higher proportion of children under 15 in the LDCs, and three-tenths due to the greater jointness of adults within the LDC households. This is a plausible result, but one must note the possible wide variation in these proportions not only for pairs of individual countries, but also for some pairs of wider regions selected among the LDCs and DCs in Table 4. The results relating to contributions of the differing proportions of 1,2, and 3+ person households (lines 16, 18 and 19) are clearly dependent upon the differences in proportions assumed in lines 15 and 17, but the dominance of the differential contribution of 1 person households seems plausible--if there be no incomparability in the definitions of one-person households between DCs and LDCs.

In turning now to differences in average size of household between rural and urban populations within the same country, we are limited to the small number of countries for which the data are at hand from international compilations (Table 5). But there are some intriguing and suggestive findings. They become more striking if we omit the

Table 5

Differences in Size of Average Household between Rural and Urban Population, Selected Countries

	France 1968 (1)	Finland 1970 (2)	Japan 1970 (3)	Chile 1970 (4)	Ecuador 1962 (5)	Pakistan 1970 (6)	Philippines 1970-1 (7)
A. Structure by Age							
1. % of urban HHs in total	71.4	56.5+	75.1	77.7	34.0	27.2	30.1
Persons per Household							
2. Rural	3.30	3.38	4.09	5.52	5.00	5.77	5.83
3. Urban	3.09	2.69	3.46	4.97	5.36	5.64	5.91
4. Difference (2-3)	0.21	0.69	0.63	0.55	-0.36	0.13	-0.08
% Under 15 in Total Population							
5. Rural	24.0	25.2	24.9	44.6	45.7	43.8	53.5[1]
6. Urban	23.6	23.4	23.6	39.1	43.9	42.5	49.1[1]
Persons under 15, per HH							
7. Rural	0.79	0.85	1.02	2.46	2.28	2.53	3.12[1]
8. Urban	0.73	0.63	0.81	1.94	2.35	2.40	2.90[1]
9. Difference (7-8)	0.06	0.22	0.21	0.52	-0.07	0.13	0.22
10. Line 9 as % of line 4	29	32	33	95	nc	100	
Persons, 15 & over, per HH							
11. Rural	2.51	2.53	3.07	3.06	2.72	3.24	2.71[1]
12. Urban	2.36	2.06	2.65	3.03	3.01	3.24	3.01[1]
13. Difference (11-12)	0.15	0.47	0.42	0.03	-0.29	0	-0.30
14. Line 13 as % of line 4	71	68	67	5	nc	0	nc
% 1 person HHs							
15. Rural	19.4	18.4	7.8	6.0	6.4	5.4	1.9
16. Urban	20.6	28.2	14.9	5.4	7.5-	9.3	1.7
% 2 Person HHs							
17. Rural	27.1	20.6	13.1	8.8	12.1	8.3	7.3
18 Urban	26.2	23.3	15.6	11.8	10.5+	8.1	6.0

(1) -- relates to children under 18 and adults aged 18 and over.

Table 5--continued

B. Contribution of 1, 2, and 3+ Person Households

		Rural		Urban		Difference	
		% of HHs (1)	Contrib. (2)	% of HHs (3)	Contrib. (4)	Differ. (5)	% of total (6)
	France						
19.	1 person HHs	19.4	-0.293	20.6	-0.311	0.018	9
20.	2 " "	27.1	-0.014	26.2	-0.013	-0.001	-1
21.	3+ " "		0.307		0.174	0.133	63
	Finland						
22.	1 person HHs	18.4	-0.282	28.2	-0.426	0.144	21
23.	2 " "	20.6	-0.109	23.3	-0.123	0.014	2
24.	3+ " "		0.391		0.079	0.312	45
	Japan						
25.	1 person HHs	7.8	-0.016	14.9	-0.031	0.015	2
26.	2 " "	13.1	-0.014	15.6	-0.017	0.003	1
27.	3+ " "		0.030		-0.372	0.402	64
	Chile						
28.	1 person HHs	6.0	-0.012	5.4	-0.011	-0.001	-0.2
29.	2 " "	8.8	-0.009	11.8	-0.013	0.004	0.7
30.	3+ " "		0.021		-0.006	0.027	4.9
	Pakistan						
31.	1 person HHs	5.4	-0.012	9.3	-0.021	0.009	7
32.	2 " "	8.3	-0.010	8.1	-0.010	0	0
33.	3+ " "		0.022		0.031	-0.009	-7

Notes

For all countries except the Philippines, the underlying data are from the United Nations, Demographic Yearbook 1971 (New York, 1972), Tables 11 and 12, and Demographic Yearbook, 1973 (New York, 1974), Tables 24 and 26. The data for the Philippines are from Bureau of Census and Statistics, Family Income and Expenditures: 1971 (Manila 1975), Tables 3 and 50. The data

Table 5 Notes--continued

in this report were utilized fairly intensively in the 1976 paper referred to in footnote 3, and the earlier paper of which the 1976 paper was a revised version (referred to in the 1976 paper). The notes below refer largely to the six countries, excluding the Philippines.

The distribution of households by size (needed for Panel A) and between rural and urban is limited to the household population. The proportion of population under 15 to total may refer to the total including some institutional population.

For the procedure involved in Panel B see the notes to the preceding tables.

For brief definitions of the urban population (defining the rural as a residual) see notes to Table 5 in the 1971 Demographic Yearbook, pp. 154-158. The definitions differ from country to country, but relate either to capitals of country and provinces, and administrative centers, or to agglomerations above a certain population level, or to presence of urban administrations and institutions.

data for Chile from the discussion, because of some peculiarities in the latter that are not easily explicable. Thus, it is puzzling to find the proportion of urban households to their total number to be higher in Chile than in the three economically more advanced countries in columns 1-3 (see line 1). It is also puzzling to find the average size of households in Chile (in 1970), at 5.1, to be as large as the average for Ecuador, a far less developed country (in 1962).

The differences in average size of households illustrated in Table 5 were naturally of much narrower range than is true among the DCs and LDCs in Table 4, or the individual selected countries in Table 3. After all, the rural and urban populations are parts of one and the same country, and their demographic and economic patterns are not likely to differ as much as in separate countries that can be at widely different levels within an extensive international range. And yet the rural-urban differences in average size of households, and in distribution of households by size, are sufficiently large to matter.

As we observe these differences, and exclude Chile from the comparison, we find that rural households in the three developed countries in columns 1-3 exceed in size the urban households by substantial margins in Finland and in Japan, and by a smaller but still perceptible margin in France (see line 4). In the three less developed countries, in columns 5-7, there is no such consistent excess in size of the average rural household over the urban; indeed,

in Ecuador (in 1962) and in the Philippines (in 1970-71), the rural household is smaller than the urban, and in Pakistan the difference in favor of the rural household is slight indeed (being less than 3 percent).

This contrasting finding relating to differences in size of rural-urban households in the developed and less developed countries in Table 5 is not due to underlying differences in proportions of children under 15 between the rural and urban populations. These proportions (with one for children under 18 for the Philippines) are shown for rural and urban populations in lines 5 and 6, and those in line 5 are uniformly higher than those in line 6--the excess being distinctly narrower for the three developed countries in columns 1-3 than for the three less developed countries in columns 5-7. It follows that the failure of the average household in the rural population of the less developed countries to exceed that in the urban must be due to the greater contribution of the adults (i.e. persons 15 and over) in the urban communities. And it may well be that this result is associated with the greater relative influx of these adults into the urban centers of the less developed countries in recent years than would be true of the populations of developed countries, with these migrants becoming members of larger households rather than forming recognizalbe one-person households.[5] This hypothesis cannot be adequately tested without much more data on size and structure of households, for the urban and rural populations of a much larger number of countries than we could readily find for Table 5.

The other tentative finding is suggested by the data for the three developed countries in Panel B. With differences in average size

between rural and urban households fairly substantial, and yet the differences in proportions of children under 15 in rural and urban populations quite small, it follows that differences in the numbers of adults per household, produced by differing proportions of households with different number of adult members, must account for a large part of the rural-urban differences in total number of persons per household. And indeed Panel B for France, Finland, and Japan shows that for these countries it was the contribution of the 3+ person households that loomed largest in accounting for the total rural-urban difference. Thus, unlike most of the international comparisons, the intra-national comparisons between countryside and city in the developed countries show that the countryside preserves large proportions of the JAA factor that is lost in the urban communities--and is, in this respect, a greater preserver of the older traditions, even though the countryside appears not to retain the tradition with respect to the NIC factor, or the much lower proportions of 1 and 2 person households. But again, the hypothesis should be checked with a wider array of countries and data.

Since the few countries used in Table 5 all show a higher proportion of children under 15 in the rural than in the urban population, and we have data readily available on these proportions for much larger number of countries, it seemed of interest here to consider these data with a greater coverage--and particularly to observe at the same time the proportions of persons 15 through 19, again for the rural and urban population separately, to see whether these proportions are affected by the rural-urban migration. This latter may affect even children under 15, but it could hardly have significant effects, particularly compared with those

on the older age group (or groups).

Table 6 summarizes the relevant information for a large number of countries, at different years but mostly for early and mid-1960s.[6] The first and obvious conclusion is that the percentage proportions of children under 15 are consistently higher in the rural than in the urban populations, in developed and in less developed countries--although there are some exceptions (for the LDC panel, this finding is true of 40 out of 49 countries with most exceptions in Africa; for the DC panel, of 11 out of 13 countries).

A second, and more interesting finding, relates to the comparative proportions of persons 15 through 19 years of age (columns 6-8). For the less developed regions, these proportions are higher in the urban population--thus reversing the sign of the difference in the proportions of children under 15; and this excess proportion of the 15-19 years age group among the urban population is found quite consistently (42 out of the 49 countries, three of the exceptions in countries in Subsaharan Africa and three of them in Latin America). By contrast, developed Europe and the United States show a slight shortage of proportions of the 15-19 group in the urban relative to the rural population (lines 6 and 7, columns 6 and 7, all eight countries in Europe showing this relation). The large weight of these countries in lines 6 and 7 combined with rather limited differentials in the other overseas countries, results in a definitely lower proportion of the 15-19 group in the urban population than in the rural in the weighted averages for the DC group in line 10.

It should be remembered that the proportions shown are ratios to current population, a mixture of different age cohorts, of age groups

Table 6

Average Proportions (%) of Groups below 15 and 15-19 years of Age in Rural and Urban Populations, Less Developed and Developed Regions, Late 1950s and early 1960s

	No. of count.	% of rural pop.	% of population below 15			% of population 15-19 years of age		
			Rural	Urban	No. of agreements	Rural	Urban	No. of agreements
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LDC regions (market economies)								
1. East and middle south Asia	9	81.7	43.8	40.3	8	8.6	10.2	8
2. Middle East	9	63.4	45.8	43.3	7	7.9	9.1	9
3. Subsaharan Africa	13	84.8	42.3	40.8	8	7.0	8.0	10
4. Latin America (ex. temperate)	18	60.9	47.2	41.1	17	9.4	10.3	15
5. All LDCs (cols 2-4 and 6-7 weighted)	49	77.2	44.3	40.8	40	8.4	9.8	42
DC regions or countries (market economies)								
6. Developed Europe	8	39.9	25.8	22.8	7	8.3	7.8	8
7. United States (1960)	1	28.5	33.4	30.1	1	8.3	7.0	1
8. Japan (1965)	1	31.9	28.7	24.2	1	10.0	11.6	0
9. Other overseas countries	3	26.7	36.6	30.0	2	8.4	8.7	0
10. All DCs (cols 2-4 and 6-7 weighted)	13	33.5-	29.8	26.3	11	8.6	8.1	9

Table 6--continued

Notes:

The entries in columns 5 and 8 denote the number of countries in which the sign of relations of columns 3-4 and 6-7 is in agreement with that shown by the averages for LDCs and DCs in the corresponding columns in lines 5 and 10.

The weights for the LDC regions are 60, 10, 15, and 15--for lines 1-4 respectively, and are suggested by columns 3 and 4 on Panel A of Table 4. The weights for the DC regions are 40, 40, 15 and 5, for lines 6-9 respectively, and are suggested by total population shown in Panel A of Table 4.

All data are from the comprehensive Table 6, pp. 166-407 of United Nations, Demographic Yearbook, 1970 (New York 1971). The % proportions were always calculated to the total excluding unallocated by age, whenever the latter were shown. The entries here are unweighted arithmetic means of the proportions for the individual countries within each region.

The following countries (with year for which the data were given) were included. Line 1: Cambodia (1962); Ceylon (1963); India (1961); Indonesia (1961); S. Korea (1966); Nepal (1961); Pakistan (1961); Iran (1966). Line 2: Iraq (1965); Jordan (1961); Syria (1960); Turkey (1960); Algeria (1966); Libya (1964); Morocco (1960); Tunisia (1966); Egypt (1960). Line 3: Central African Republic (1959-60); Congo (1955-7); Ghana (1960); Mali (1960-1); Nigeria (1963); Zambia (1963); Gabon (1961); Namibia (1960); Chad (1964); Congo PR (1960-1); Dahomey (1961); Guinea (1955); Togo (1958-60). Line 4: Costa Rica (1963); Dominican Republic (1960); El Salvador (1961); Guatemala (1964); Honduras (1961); Jamaica (1960);

Table 6 Notes--continued

Mexico (1960); Nicaragua (1963); Panama (1960); Brazil (1960); Chile (1960); Colombia (1964); Ecuador (1962); Paraguay (1962); Peru (1961); Venezuela (1961); Trinidad and Tobago (1960); Guyana (1960). In general, we tried to include as many LDCs as possible--excluding only those in which the proportion of urban population was well below 10 percent.

For the developed countries, the following were included. Line 6: Denmark (1965); Finland (average 1960 and 1970, the latter reported in Demographic Yearbook, 1973 (New York 1974); France (1968); Netherlands (1968, semiurban included with rural); Norway (average of 1960 and 1970); Sweden (1965); Switzerland (average for 1960 and 1970); England and Wales (1961). Line 9: Canada (1960); Australia (1966); New Zealand (1961).

For brief definitions of "urban" (and thus of rural as a residual) for a large number of countries see notes to Table 5 of the same 1970 Demographic Yearbook, pp. 159-165. See also the note on definition of "urban" in Table 5 above.

that are survivals of cohorts originating in different past years. This complicates comparing shares of the age group of say 15-19 with those of 10-14, for the 15-19 group at a given date is part of the cohort born 15 to 20 years ago, whereas the 10-14 group is part of the cohort born 10 to 15 years ago. Assuming constant fertility and mortality (by age groups) and a positive rate of natural increase, we expect the proportions of successive five-age groups in a given population to decline--partly because of different spans of mortality, partly because of the rises in base to which the rate of natural rate of increase is applied in a growing population. And, of course, any changes in vital rates, aggregate and by age, would complicate further the comparison of age-group proportions in current population. But all of this does not bar the inference that if we find, in the case of LDCs, a reversal of the type observed, in the comparative proportions in rural and urban population of the under 15 and 15-19 age groups, the only plausible explanation (barring unsuspected major biases and errors in the basic data) is that there has been sufficient rural-urban migration in the 15-19 group to reverse the urban shortfall in this group that would have otherwise occurred. And the parallel inference for the different finding in the developed countries of Europe and in the United States is that such rural-urban migration in the 15-19 age group was not sufficient to reverse the disparity in proportions that prevailed in the groups under 15 years of age. Thus, one should refer back to our earlier discussion concerning the age-line dividing children from adults; and repeat our argument that it is the evidence concerning the possibly substantial migration among the 15-19 group from the countryside to the cities, particularly in the less developed countries, that led us to set the division line at 15.

Finally, one should add that the lack of evidence on the substantial migration from the countryside to the cities of the 15-19 group in the developed countries is not true of the older prime ages in the labor force. In the paper referred to in footnote 5, Table 10, p. 21 shows proportions to rural and urban population, of men and women (given separately) aged 15 through 49, these being treated as both childbearing and working ages (prone to migration) for women and working ages (again prone to migration) for men. Combining the percentage shares for men and women, and using the regional averages shown in the table, we obtain the following summary:

Regions (comparable to Table 6)	No. of countries (1)	% Proportions, 15-149	
		Rural Pop. (2)	Urban Pop. (3)
1. East and MS Asia	10	44.8	49.1
2. Middle East	8	41.2	44.2
3. Subsaharan Africa	13	46.5	52.1
4. Latin America (including temperate)	17	42.4	47.3
5. LDCs, weighted (0.60;0.10;0.15; 0.15--succ. lines)		44.3	48.8
6. Devel. Europe	8	46.8	48.2
7. Japan	1	47.3	55.8
8. U.S. and Canada	2	43.5	47.3
9. Australia-NZ	2	45.3	46.6
10. DCs weighted (0.40; 0.15; 0.425; 0.025--succ. lines)		46.3	48.9

The evidence is clear that for the broader span of the working ages, the relevant proportions in urban population are greater than in rural

population in both less developed countries and the developed countries--reflecting the rural-urban internal migration, which, for obvious reasons, tends to be concentrated in the working ages. The different finding in Table 6 for the 15-19 age group suggests that such migration becomes significant at an earlier age in the less developed countries than in the developed--a reflection possibly of greater pressures toward early employment and earlier beginning of working life in the less developed than in the developed countries.

In addition to the differences in the age-incidence of the rural-urban migration between the developed and less developed countries, stressed above as most relevant to our topic, there are interesting sex-differences touched upon in the paper referred to in footnote 6. In connection with Table 10, p. 21, the text comments that.."in Asia and Africa the internal migration toward the cities is concentrated on men, while that in Latin America and the DCs appears concentrated on women " (p. 22). Such sex-differences in propensity to rural-urban migration would be of importance in a full analysis of the size and structure of households of countries at different levels of economic development. But we cannot pursue this topic further here.

In turning now to the last type of comparison of size and size distribution of households, over fairly long periods of the demographic transition and change associated with economic growth, we use data for the United States as an illustration. These cover, with wide gaps, a long period from 1790, with more details relating to the 20th century; and the summary findings are presented in Table 7. Over this long period, the area and

Table 7

Allocation of Changes in Size of Average Household,
United States, Selected Years, 1790-1970

A. Allocation by Age Structure (below 15 and 15 & over)

	Persons per HH	% under 15 in population	Persons below 15 per HH	Persons 15 + per HH	Changes between Success. dates		
					Col. 1	Col. 3	Col. 4
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. 1790	5.79	49.9	2.89	2.90			
2. 1850	5.55	41.5+	2.30	3.25	-0.24	-0.59	+0.35
3. 1890	4.93	35.5+	1.75	3.18	-0.62	-0.55	-0.07
4. 1910	4.54	32.1	1.46	3.08	-0.39	-0.29	-0.10
5. 1930	4.11	29.4	1.21	2.90	-0.43	-0.25	-0.18
6. 1950	3.37	26.9	0.91	2.46	-0.74	-0.30	-0.44
7. 1970	3.14	28.5-	0.89	2.25	-0.23	-0.02	-0.21
Wider Intervals							
8. 1790 to 1890					-0.86	-1.14	+0.28
9. 1890 to 1930					-0.82	-0.54	-0.28
10. 1930 to 1970					-0.97	-0.32	-0.65
11. 1890 to 1970					-1.79	-0.86	-0.83

B. Contributions of 1, 2, and 3+ Person Households, to Changes over the Wider Intervals

	% in HHs		Contribution to Decline in persons per HH (rises marked +)			Columns 3-5 as % of Total Decline (rises marked -)		
	1 pers. HHs	2 pers. HHs	1 pers.	2 pers.	3+ pers.	1 pers.	2 pers.	3+ pers.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
12. 1790	3.7	7.8						
13. 1890	3.6	13.2	+0.002	0.049	+0.327	-0.2	5.7	-38.0
14. 1930	7.9	23.4	0.094	0.120	0.066	11.5	14.6	8.0
15. 1970	17.1	28.8	0.255	0.048	0.347	26.3	4.9	35.8
16. 1890-1970			0.293	0.184	0.453	16.4	10.3	25.3

Table 7--continued

Notes:

All the underlying data are taken, or estimated, from U.S. Bureau of the Census, Historical Statistics of the United States Colonial Times to 1970, Bicentennial Edition, Part 1, Washington, D.C. 1975. Persons per household are from Series A-288-319, p. 41. The proportions of 1 and 2 person households, for the years indicated, are from Series A-335-349, p. 42. The proportions of population below 15 years of age, for the years beginning in 1890, are from Series A-119-134, pp. 15ff.

The only entry that had to be estimated was the % proportion of population below 15 years of age in 1790. The earliest date for which this proportion could be calculated for total population was 1850 (when it was 41.5+ percent, compared with 35.5- in 1890). The estimation was based on movement of the proportions for the white population (available for below 15 group back to 1830, and for the below 16 group back to 1800). It was done by calculating the relative changes in the percentages of the available younger group, and extrapolating back the 1890 proportion the accumulated relative change. Since the proportion of whites, below 16 years of age, to total white population was as high as 50 percent in 1800, the estimate used in line 1, col. 2, cannot be much off the mark.

population of the country grew dramatically; some discontinuity is introduced by inclusion of Hawaii and Alaska in 1960; and there are minor incomparabilities in inclusion and exclusion of institutional households (see the notes in the source cited in Table 7). But the broad findings, over the long period, are not likely to be much affected by these statistical inadequacies. They are, however, affected by the substantial net immigration inflows that began in the 1830s, and continued with some interruptions and changes in volume to recent decades.

Over the almost two centuries span, the average size of the household declined from 5.8 persons in 1790 to 3.1 in 1970; and as Table 1 above shows, it declined further to 2.9 in March 1976. But the rate of decline was relatively moderate over the first six decades, and began accelerating only after the Civil War. The decline over the first six decades was just about 4 percent; over the next sixty years, from 1850 to 1910, almost 20 percent; over the following sixty years, from 1910 to 1970, almost 40 percent.

This acceleration of the rate of decline in the average size of the household was accompanied by a marked shift in the relative contribution to this decline of the NIC, the natural increase-children factor, and of the JAA, jointness or apartness of adults factor. Over the first six decades, the decline in the proportion of children under 15 was sufficient to more than outweigh the decline in total persons per household--with the contribution of the adults serving to <u>increase</u> rather than diminish the total of persons per household. The result may be due in part to effect of immigration, the latter being more concentrated in ages above 15. By

1850, the proportion of foreign born (whites and free Negroes) to total population was 2.26 million out of a total of 23.2 million, or 9.8 percent. If we were to assume that in both 1790 and 1850, all children under 15 were native born, and neglect the proportion of adult foreign born in 1790, the percentage of under 15 in 1850 would be raised from 41.5 to 46.0 (i.e., divided by 0.902). On this extreme assumption, the average of children under 15 in 1850 would be 2.55 per household, leaving 3.00 of adults per households--still a slight rise from the average of 2.90 in 1790. On the other hand, the marked decline in proportion of children under 15 is confirmed by the data on fertility and number of children under 5 per 1,000 white women of childbearing ages, both available for the span from 1800 to 1850.

This interesting case of the jointness of adults contributing to an increase over time in the size of the household is limited to the first six decades (and may have ended earlier). After that date, the declining rate of natural increase continues to contribute to the decline in the average size of the household, but in diminishing proportions, and becomes negligible in the last two decades, between 1950 and 1970, whereas the contribution of the jointness of adults factor, or rather of the growing apartness of adults, is increasingly important in the total reduction in the size of the average household. Thus, over 1930-1970 span, the JAA factor accounts for two thirds of the total decline, the children-factor for only a third.

Panel B, which analyzes the contributions of the different proportions of 1, 2, and 3+ person households to the total JAA component, is

based on size distributions of households, and the latter are not available for any year between 1790 and 1890. Even so, the comparison of the percentage proportions of 1 and 2 person households in lines 12 and 13, columns 1 and 2, demonstrates very little change in the shares of the 1 person household, and a small absolute (although large relative) rise over the century in the share of 2 person households. The analysis indicates that it was the rise in the adults average for households of 3 and over persons that contributed to the positive sign of the JAA factor in the movement from 1790 to 1890 (see line 13, columns 3-5). The further evidence in Panel B on the periods following 1890 indicate that the major contributions to the decline in adult persons per household were made by the rising percentages of the 1 person households, and the reduction in average of adults per 3+ person households--with the rather moderate share of the contribution of the 2 person households. Thus it is the increase in the proportion of household at one extreme tail, viz. 1 person households, and the decrease in the proportions at the other extreme tail--to the right of the size distribution well above the 3 and 4 person household --that may be the major contributors to the decline in numbers of adults per household, particularly after the 1930s.

Table 7 covers a range in size of average household that is almost as wide as that found in current cross-sections among developed and less developed countries in the selected sample in Table 3. And while the record is that for a rapidly growing country affected by immigration, it is not unlikely that the broad findings on the shift from the contribution of declining fertility and natural increase via the declining propor-

tion of children under 15 to that of increasing apartness of adults in the more recent decades would be found in other developed countries. Testing this hypothesis would require comparable long-term data on size and size-structure of households, as well as those on age distributions of population, for other developed countries.

The findings in Section III suggest that the contribution of the factor connected with the jointness and apartness of adults to the total disparity in average size of households is substantial--particularly in rural-urban comparisons within developed countries and in comparisons over time for recent periods for a developed country like the United States. The JAA factor is also of some weight in the differences in average size of households in international cross-section comparisons. With 1 and 2 person households comprised predominantly of adults, we should examine their other characteristics for whatever light may be shed on the contributions of these small households to differences in size of households, at least for international comparisons.

IV. Small and Large Households, by Age and Sex of Head: An Illustrative Comparison.

Here we revert to a comparison of the detailed data available for the United States and Taiwan, except that unlike our illustration in Section I (Tables 1 and 2), the one here is based at first on data for Taiwan Province (excluding Taipei city): the more detailed cross-classification tables are available, in published form, for the Province alone. But it accounts for more than 80 percent of all households, and a larger proportion of total population; and the analysis illustrates certain significant,

hitherto untreated, aspects of the size distribution of households in a developed and less developed country.

Table 8 shows the distribution of households of differing size by age of head of household, the cross-classifications being compared for the United States and Taiwan Province for the same size-classes of households and identical age-classes of head ranging from below 25 years of age, to 55 and over. A number of findings can be suggested, which may not be untypical of other comparisons of the size-distribution of households between developed and less developed countries.

First, a dominant proportion of the 1 and 2 person households, which loom so large in the United States, is accounted for by households at advanced ages of head. Out of the 20.6 percent share of 1 person households in all households (line 1), 12.4 percentage points are households with head aged 55 years or over; of the 30.6 percentage share of 2 person households, 16.5 percentage points are households with heads aged 55 or over (line 2). Yet, while the 1 and 2 person households in the United States are dominated by units at advanced age of head, this is not true of the larger households, of 3 and over. There is a similar, but weaker concentration of the smaller households at the advanced ages of head in Taiwan Province, (see lines 9 and 19, columns 1 and 6), but it is of little weight because the over-all proportions of 1 and 2 person households are so small in that country.

Second, it follows that in the contribution of 1 and 2 person households to the smaller average size of households in the United States than in Taiwan, the old-age small households play a dominating part. Thus, of the total discrepancy in the shares of 1 person households,18.0 percent-

Table 8

Distribution of Households by Size and by Age of Head, United States, March 1976, and Taiwan Province, end 1975

Panel A. United States

Size of Household Classes (1)	All Households (2)	Age of Head Classes: Below 25 (3)	25-34 (4)	35-44 (5)	45-54 (6)	55 & over (7)	55-64 (8)	65 & over (9)
		% Shares in Total of All Households						
1. All Households	100.0 (72.87 million)	8.1	21.4	16.7	17.5	36.3	15.9	20.4
2. 1 person household	20.6	1.8	2.9	1.4	2.1	12.4	3.5	8.9
3. 2 person household	30.6	3.5-	4.6	1.8	4.2	16.5-	7.3	9.2
4. 3 person household	17.2	1.8	4.8	2.5+	3.9	4.2	2.8	1.4
5. 4 person household	15.7	0.7	5.5-	4.4	3.2	1.9	1.4	0.5+
6. 5 person household	8.6	0.2	2.3	3.3	2.1	0.7	0.5+	0.2
7. 6 person household	4.1	0.1-	0.9	1.7	1.1	0.3	0.2	0.1
8. 7 & over	3.2	0+	0.4	1.6	0.9	0.3	0.2	0.1
9. Persons per household	2.89	2.30	3.15	4.09	3.43	2.05	2.41	1.77

Panel B. Taiwan Province

Size of Household Classes (1)	All Households (2)	Age of Head Classes: Below 25 (3)	25-34 (4)	35-44 (5)	45-54 (6)	55 & over (7)	55-59 (8)	60 & over (9)
		% Shares in All Households						
10. All Households	100.0 (2.59 million)	3.9	24.1	31.6	28.0	11.8	6.2	5.6
11. 1 person household	2.6	0.1	0.2	0.3	0.9	1.1	0.4	0.7
12. 2 person household	4.8	0.5-	1.2	0.5-	1.1	1.5+	0.4	1.1
13. 3 person household	10.2	0.8	3.5	1.4	2.8	1.7	0.8	0.9
14. 4 person household	16.3	0.8	5.2	3.9	4.7	1.7	1.1	0.6
15. 5 person household	22.3	0.6	6.2	7.9	6.2	1.4	0.9	0.5+
16. 6 person household	19.2	0.5	3.9	7.8	5.8	1.2	0.8	0.4
17. 7 & over	24.6	0.6	3.9	9.8	7.1	3.2	1.8	1.4
18. Persons per household Taiwan Province	5.37	4.63	4.99	5.85	5.39	5.05-	5.40	4.67
19. Persons per household Taiwan Area	5.27	4.46	4.89	5.78	5.35	4.86	5.21	4.47

Table 8--continued

Notes:

Panel A -- calculated from Table 15, p. 48 of the March 1977 source cited in the notes to Panel A of Table 1.

Panel B, lines 10-18 -- calculated from Department of Budget, Accounting and Statistics, Taiwan Provincial Government, Report on the Survey of Family Income & Expenditure, Taiwan Province, 1975 June 1976, Table 30, pp. 616 ff. Taiwan Province excludes Taipei city and comprised in 1975 2.59 million households, out of some 3.01 for Taiwan Area (which includes Taipei City). No comparable detailed data for Taipei city are shown in the separate report for the latter.

Panel B, line 19 -- calculated from Table 12, pp. 148-49 of the source for Taiwan cited for Panel B of Table 1.

age points (i.e., 20.6 minus 2.6), the contribution of the old age group is 11.3 points, or close to two-thirds; of the total differential in the shares of 2 person households, 25.8 percentage points (i.e., 30.6-4.8), the contribution of the older age of head group is 15.0 points, or somewhat less than six-tenths. The residual discrepancies stem largely from the structure at the younger age-of-head levels, below the age of 35. For 1 and 2 person households combined, the shares of these younger groups under 35 total 12.8 percentage points for the United States (see lines 2 and 3, columns 3 and 4), compared with 2.0 percentage points for Taiwan Province (see lines 11 and 12, columns 3 and 4). A similar comparison for the intermediate age classes, from 35 to 55, yields total shares for United States of 9.5 percent compared with 2.8 in Taiwan Province. Thus, the major source of the higher shares of small households in a developed country like the United States is the heavy concentration of these households at advanced ages of head, presumably after children mature and depart; and, secondarily, a greater tendency for apartness at the younger levels of age of head.

Third, the distinctive distribution of small households by age of head in the United States, combined with large proportions of these small households in the total, produces a structure of households by age-of-head that is necessarily quite different from that in the Taiwan Province (and would differ almost as much from that in the Taiwan Area as a whole). Both the shares of the very young households, under 25 years of age of head, and particularly of the older households are proportionately greater in the United States than in Taiwan Province, the proportions being 8 and 4 percent for the younger age-of-head group (column 3, lines

1 and 10) and 36 and 12 percent respectively for the old age-of-head group of over 55 (column 7, lines 1 and 10). Even more interesting are the differences between the two countries in the internal structure by size <u>within</u> the extreme age-of-head classes. Thus, in the United States, both the under 25 and the 55 and over age classes are dominated by the 1 and 2 person households; these account for over six tenths of the total in the under 25 age class and for almost eight-tenths of the 55 and over age class (see lines 2 and 3, compared to line 1, column 3 and column 7). In Taiwan Province, 1 and 2 person households account for less than a fifth of all households at the under 25 age level of head, and for about a fifth of the total of households with heads aged 55 and over (see lines 11 and 12, compared with line 10, columns 3 and 7). It is particularly striking to find in Taiwan such a large proportion of young heads (under 25) in households including 5, or 6, or 7 and over members.

Fourth, because of these large effects of small households on the structure of households at the young, and particularly, at the old ages of head in the United States, the movements of the average size of household through the succession of ages of head, or the life cycle pattern, are markedly different from those in a country like Taiwan. With an overall average of 2.89 persons, the average number per household in the United States rises markedly from 2.3 persons in the under 25 years age-of-head group, to a peak of 4.09 in the 35-44 age-of-head class, and then drops sharply to 2.05 in the 55 and over class (and even more strikingly to 1.77 in the 65 and over class, see line 9). This is a swing to a peak almost double that at the initial and terminal troughs. In Taiwan

Province, the range in persons per household through the successive age-of-head classes (see line 18) is from 4.6 persons in the under 25 years of age head class to a peak of 5.9, or only thirty percent higher, and then down to 4.7 in the 60 and over age class. The suggested difference in the life cycle pattern of a typical household between the two countries is obvious. In the United States, that life cycle begins with a substantial period of life in one person household, moves rapidly to family and a peak size of over 4 (while the children are still within the family) and then enters a prolonged period of a single couple and eventually a single person household. Such patterns, while presumably found also in Taiwan, are far less common than those in which a household varies much less in size over the full span and in which the identity of the head may be shifting while that of the membership may be only moderately affected. The implications of the difference in the amplitude of the swing in size of household through the successive age-classes of head for the evaluation of distributions of income among households during that life cycle are obviously significant.

The association between size of household and sex of head is illustrated in Panel A of Table 9. The proportion of female head households in the United States, in early 1976, at 24 percent, was four times as great as the proportion in the Taiwan area. And much of the difference is due to the high proportions of female heads among the 1 and 2 person households, particularly the former. Thus, of the total disparity in female head proportions between the two countries, 18.2 percentage points, 12.6 points or about two-thirds, are accounted for by the differing incidence of female headship among the 1 person households (i.e., 13.2 minus 0.6, see line 2, columns 3 and 6). The female head proportions in the United States exceed

Table 9

Distribution of Households by Size and Sex of Head, and Age and Sex of Head, United States, 1976 (or 1970) and Taiwan Area, 1975

Panel A. By Size of Household and Sex of Head

Size Classes of Households	United States, March 1976			Taiwan Area, end 1975		
	All (1)	Male Head (2)	Female Head (3)	All (4)	Male Head (5)	Female Head (6)
	Entries are % shares in all households					
1. All households	100.0 (72.87 million)	75.8	24.2	100.0 (3.01 million)	94.0	6.0
2. 1 person household	20.6	7.4	13.2	3.1	2.5	0.6
3. 2 person household	30.6	25.5	5.1	5.2	4.3	0.9
4. 3 person household	17.2	14.3	2.9	10.3	9.4	0.9
5. 4 person household	15.7	14.1	1.6	16.9	15.8	1.1
6. 5 person household	8.6	8.0	0.6	22.3	21.1	1.2
7. 6 person household	4.1	3.7	0.4	18.9	18.3	0.6
8. 7 & over	3.2	2.8	0.4	23.3	22.6	0.7
9. Average, persons per household	2.89	3.18	1.98	5.27	5.35	4.13

Panel B. By Age and Sex of Head

Age of Head Classes	United States, March 1970			Taiwan Area, end 1975		
10. All households	100.0 (62.88 million)	78.9	21.1	100.0 (3.01)	94.0	6.0
11. Below 25	6.8	5.5+	1.3	4.0	2.9	1.1
12. 25-34	18.6	16.5-	2.1	24.6	23.3	1.3
13. 35-44	18.5	16.3	2.2	30.8	29.1	1.7
14. 45-54	19.5	16.4	3.1	28.4	27.2	1.2
15. 55 & over	34.6	24.2	12.4	12.2	11.5	0.7
16. Average, persons per household	3.17	3.48	2.03	5.27	5.35	4.13

Table 9--continued

Notes:

Panel A, columns 1-3 -- calculated from U.S. Bureau of the Census, Current Population Reports, Series P-60, no. 104 (Washington, March 1977), Table 15, p. 48.

Panel B, columns 1-3 -- calculated from Historical Statistics, vol. I source cited for Table 7, Series A-323-334, p.42. The averages in line 16 are from U.S. Bureau of the Census, Current Population Reports, Series P-60, no. 72 (Washington, August 1970), Table 5, p. 15.

Panels A and B, columns 4-6 -- calculated from DGBAS, Report on the Survey of Personal Income Distribution in Taiwan Area, 1975 (Taipei, 1976). Panel A is from Table 33, pp. 220-221 and Table 14, p. 152 (the latter for line 9). Panel B is from Table 32, pp. 218-219.

those in the Taiwan Area also for the 2 to 4 person households (compare columns 3 and 6, lines 3-5), but it is only for the 1 person households that the difference contributes so much to the total disparity in line 1.

Since we observed in Table 8 that the large proportion of 1 person households in the United States was concentrated in the upper age-of-head class of 55 and over, and we now find in Panel A of Table 9 that the large proportion of 1 person households in the United States is associated with a large concentration of female headship, it follows that female headship among 1 person households in the United States should be concentrated in the advanced age-of-head class of 55 years of age and over. We cannot test this inference with the 1976 data for the United States without much elaborate estimation. But we can use the data for United States in 1970 (March), when the over-all proportion of female head households was somewhat lower than in 1976 (21 instead of 24 percent)--but still very much higher than that for Taiwan Area in 1975 (see Panel B of Table 9, line 10, column 3). And the comparison shows a heavy concentration of female households in the advanced age-of-head class of 55 and over--12.4 out of 21.1 percent, or about six-tenths (column 3, lines 10 and 15). It is the disparity in female headship incidence for this advanced age-of-head class between United States and Taiwan that contributes 11.7 percentage points to a total difference of 15.1 percentage points, or well over seven-tenths.

Thus, our finding in Table 8, concerning concentration of the large proportions of 1 and 2 person households in a developed country like the United States predominantly at the older age-of-head classes and second-

arily in the very young age-of-head classes, may now be supplemented by the finding that for the 1 person households the large proportions in the United States mean concentration on female head households, in the advanced age-of-head classes. In other words, a substantial proportion of the one-person households in an advanced country like the United States are single women in older ages, presumably widows who have survived their husbands. Such a group appears to be quite small in a less developed country like Taiwan, small with respect to heading a separate household (see column 6 of Panels a and B, which fails to show any clear association between female headship and either size of household or age of head).

V. Concluding Comments

With some reservations, the statistical evidence on size and size-structure of households surveyed in this paper, relates to family households--units from one to several persons, distinguished by joint residence and, in case of multiperson units, by ties of blood, marriage, or adoption among the members.

In the comparisons of average size of households in international cross-sections of countries at different levels of economic development, between rural and urban households within one and the same country, and of differences over long spans of time within a developed country, we tried to allocate the differences between two sets of factors. One was the differing number of children under 15 per household, reflecting largely fertility and natural increase (NIC factor). The other was the difference in number of adults per household, reflecting different propensity of adults to live together (or apart, the JAA factor). In the various sets of comparisons

and findings, we observed wide variations in the relative contribution to differences in average size of households of the two factors; with both being of substantial magnitude in most comparisons. And the JAA factor could be allocated further among the contributions of different proportions of 1, 2, and 3-over person households. All of this relates, of course, to the well-known substantial differences in average size of household: the large size in the less developed countries, with their much lower proportions of 1 and 2 person households than in the developed countries; similar differences between rural and urban households, particularly in already developed countries; and the long-term trends within the developed countries towards smaller households, with increasing proportions of 1 and 2 person households in the total.

When viewed against the larger concept of the family, noted in the introduction to this paper, i.e. of a group of persons sufficiently related by blood or marriage ties (or adoption) to warrant expectation of joint decisions on at least some significant economic matters, size-differences among households due to greater numbers of children under 15 raise no apparent analytical problems. The children, being dependents, are an important focus of family decisions, but they cannot be viewed as <u>participants</u> in such decisions--as is true potentially of every adult member of the wider family group, regardless whether they live together or apart. Here the major question is as to the significance of joint residence in its meaning in terms of family decisions on economic choices; and the question is brought into sharp focus by the finding that in the developed countries in recent years over half of all the households were one or two person units, heavily dominated by men and women in advanced ages

and secondarily among the young--whereas similar proportions among the LDCs were well below 10 percent for the two small household groups.

The question just raised is, to be sure, part of a wider problem bearing upon possible clustering of decisions and interest among blood or marriage-related but separate family households, regardless of their size. If in the course of economic growth the parental pair stays in agriculture, and suffers a decline in relative (if not in absolute) income, while its offspring,having migrated to the city, secures in the longer run a higher relative economic position, do we view this as emerging inequality among households or do we combine the two households in a cluster on the ground of sufficient community of economic interest? But the specific question raised above is urged upon us by the finding that it was within the last few decades that there was a marked morsellization of family households within the developed countries--in which both the very young, and particularly the older members of what were heretofore bigger, several-generation, family households, separated into apparently independent household units.

Three comments can be advanced, which, while obviously not answering the question, may at least suggest directions of exploration. The first is one already made, and relates to the extent to which separate residence means completely separate foci of economic decision that would warrant our treating the morsellized distribution of households by size as if they represent distinct economic decision units. Offhand, one would argue that while separate location must mean separate decisions on everyday allocation of time of income, this is not true of some of the larger economic decisions--larger outlays or decisions with long-term consequences as to

location or occupation. And what we need, in this connection, are data on the various types of economic decision within the households, with particular distinction of those made relatively independently and those in which the blood and relation ties among separate family households may be telling.

Second, if we assume that separate location among related family household units means, by and large, independent economic decisions and that we are warranted in viewing the greatly morsellized households in developed countries as truly separate recipient units, one should note that such morsellization widens the range of income inequalities beyond that afforded within a distribution of households that are relatively larger. All other conditions being equal (including the proportions of dependents, i.e. children below a certain age), a larger number of potentially working adults would allow greater scope for the family household as an income-equalizing mechanism than would be a size distribution in which 1 and 2 person family households would be so relatively numerous. And if there is here this aspect of widening of income inequality (certainly on a per household, and possibly on a per person basis), to what extent would such widening inequality be a integral consequence of economic development--in which the reduction in the number of children with greater investment in their education and rearing, makes the nuclear family an indispensable social institution, and forces, as it were, the separation of the very young, and particularly of the older generation, out of what might be called the standard family household of the central range with respect to age of head. If such an attribution is at all plausible, we have a curious case of

a secular change in measured income inequality among households originating not at the production end, in greater inequality of shares flowing from the production system to a standard distribution of recipients, but originating at the receiving end, in the way receiving units organize themselves into households as foci of economic decisions.

Finally, one may suggest that in the handling of the empirical data on household distributions by size and income, the question just raised would seem to indicate the value of distinguishing between what might be called the marginal units and the standard household units--marginal and standard with respect to some model of a prevailing household, in the comparable range, that would mean excluding from the standard groups of households those that, with respect to their characteristics (such as age of head, and size), represent quite a distinct group. This is, in fact, what is already done in the statistical data for the United States, with its distinction between families and unrelated individuals (most of the latter, but not all, are identical with single person households); and, in general, it is well to go beyond the purely formal aspects of the distribution of households, searching for significant groups within them that would not be dependent on the statistical expediency of easier identification that must be followed in the sample or census surveys. To be sure, such attempts may involve some difficult choices as to how far one can separate marginal and standard parts of a household distribution, to attain greater analytical comparability between,say,developed and less developed countries; but such difficulties must be faced in all attempts

to convert raw statistical data into quantitative counterparts of meaningful economic and social concepts.

FOOTNOTES

[1]See United Nations, Manual VII. Methods of Projecting Households and Families (New York, 1973), p.6.

[2]However, households are predominantly family households. Thus for the United States in March 1976 (used in Table 1 below), only 2.6 out of 72.9 million households had members unrelated to the head; so that family households comprised 97 percent of the total. (See U.S. Bureau of the Census, Current Population Reports, Series P-60, no. 104, (Washington, March 1977), Table 3, p. 13). There are no data at hand on this point for other countries; but the large preponderance of family among all households is generally asserted in the source cited in footnote 1.

[3]The earlier paper, "Fertility Differentials Between Less Developed and Developed Regions: Components and Implications," Proceedings of the American Philosophical Society, vol. 119, no. 5, October 1975, touches upon the first point (see Table 10, and discussion, pp.385-88). The later paper, "Demographic Aspects of the Size Distribution of Income: An Exploratory Essay," Economic Development and Cultural Change, Vol. 25, no. 1, October 1976, explores the second set of findings in Section III, Differences in Size of Family or Household, pp. 21-48.

[4]See on both points the discussion in the United Nations source cited in footnote 1 (Chapter 2, "Evaluation of Data," pp. 12-16). With respect to one-person households, the source comments:

> "Both lodgers and boarders, and even the single persons living separately in apartments, are marginal groups whose definitions are generally not clear-cut. The distinction between them is sometimes quite arbitrary."

This comment implies a confusion between lodgers and boarders, who should be counted as members of the host household, and individuals living separately who should be counted as one-person households.

[5]It is in this connection that incomparability in definitions of one-person household discussed above in citations from the UN document (referred to in footnote 4 above) becomes so relevant. If migrant workers in the cities all tend to be classified as constituting one-person households, the result may be a very high over-all proportion of one-person households in countries such as Cameroon (46.0 percent in 1957), Sierra Leone (22.7 percent in 1963), Jamaica (19.1 percent in 1960)--all of them appreciably higher than many such shares in developed countries (see source cited in footnote 1, Table 3, pp. 11-15). Whether these be properly defined one-person households or not, their significance in terms of the wider concept of the family is problematic--a question that, as will be seen below, may be legitimately raised in connection with the 1 and even 2 person households in the developed countries.

[6]The underlying data from UN Demographic Yearbook, 1970, on distribution of rural and urban populations by age and sex, were utilized intensively, in an analysis aimed at comparing birth rates and fertility between the rural and urban populations, in my earlier paper, "Urban-Rural Differences in Fertility: An International Comparison," Proceedings of the American Philosophical Society, vol. 118, no. 1, February 1974,

pp. 1-29. The paper contains a discussion of a number of aspects of rural-urban differences in proportions of children under 5, and of women in childbearing ages (15-49) and of both men and women in working ages (15-49). It may be consulted on a number of aspects of rural-urban differences relevant to the discussion here. The earlier paper covers a larger number of countries, including communist countries, less developed Europe, and temperate Latin America, all of them excluded from Table 6; and unlike the procedure in Table 6, derives unweighted averages of country proportions for the relevant DC and LDC totals. But for the same coverage, the results in the earlier paper are comparable with those in Table 6.

[7]This and later references are to the Historical Statistics volume cited in the notes to Table 7. The data on foreign born in 1950 are in Series 105-118, p. 14; those on birthrates and children under 5 per 1,000 white women of childbearing age are in Series B 5-10, p. 49, and Series B 67-98, p. 54.